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to the primitive type, and as family portraits show a uniformity that could not exist if the race obtained but its mathematical proportion of ancestral peculiarities, arguments based on the mathematics of the case avail little in the discussion.

EDWARD H. WILLIAMS, JUN.

Bethlehem, Penn., April 9.

BOOK-REVIEWS.

The Great Earthquake of Japan, 1891. By PROFESSOR JOHN MILNE, F.R.S., and PROFESSOR W. K. BURTON, C.E. With plates, by K. Ogawa. Yokohama, 1892.

In these modern days when photography has assumed such an important part, not only in the artistic side of life, but in the work of scientific observation as well, it was inevitable that after any great natural occurrence like the Japanese earthquake of October, 1891, the camera should be employed to assist in preserving a correct record of its effects. Some of the pictures so taken have been reproduced in the European and American illustrated papers and have aided much in conveying to western readers an idea of the great destruction caused by this calamity; but none which the writer has seen can be compared to the beautiful series of pictures contained in the volume named above.

It is an oblong quarto, 29 cm. by 41 cm. in size, containing twenty-nine full-page heliotype copies of photographs and one map. All but three of the photographs were made by the authors for the Imperial University of Japan, and are copyrighted in its

name. They are printed on a fine Japanese paper, which is itself a product of the very district shaken by the earthquake. The book is published by Lane Crawford & Co., Yokohama, but the press-work was done in Tokyo. It is prepared as a popular souvenir of the earthquake, and makes no attempt at any scientific discussion of the phenomena, the ten pages of introductory letter-press on earthquakes in general and the short explanation attached to each plate being mainly descriptive.

In nearly one-third of the plates the objects illustrated are the temporary shelters to which the inhabitants were driven. But in those which illustrate the ruined condition of the buildings and bridges, the excellent plates give such perfect details that many points of scientific interest can be seen and studied. This is especially true of the series of five views of the Nagara iron railroad bridge. This bridge consisted of five two hundred-foot spans of trussed girders, of which one span fell entire into the river's bed, carrying down with it one end of each of the adjoining spans, yet the pictures make plain that the girders themselves were so well put together that they are but little injured by their fall. Another view shows the approach to this bridge, where the embankment has entirely sunk away, leaving the rails and ties eighteen feet up in the air. At another place where the rails have been distorted into a serpentine form, the photograph shows three distinct horizontal flexures in which the rails are at least two feet out of their alignment. Other views again illustrate the crevasses, often several feet wide, by which the ground was riven, especially

CALENDAR OF SOCIETIES.

Philosophical Society, Washington.

April 9.—W. J. McGee, Illustrations of Isostatic Pressure; Bailey Willis, Illustrations of Appalachian Structure (with lantern views); Robert T. Hill, The Geologic Evolution of the Topography of Texas (with lantern views).

Geographical Club, Philadelphia.

April 6.—Henry Pettit, The Orient and the Occident.

Contemporary Club, Philadelphia.

April 12.—Frank Hamilton Cushing, Zuni Folk-Lore.

Oriental Club, Philadelphia.

April 14.—Rev. Dr. Marcus Tastion, Psalms 24th, 73d, and 90th; Talcott Williams, Note on Arab Geography.

Numismatic and Antiquarian Society, Philadelphia.

April 7.—Inman Horner, Lieutenant Gorger's Notes on Alaskan Indians. Exhibition Alaskan Objects.

Publications Received at Editor's Office.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS. Transactions, Vol. VII. New York, The Institute. 8°. 647 p.

DAVIES, CHARLES. New Elementary Algebra. Edited by J. H. Van Amringe. New York, American Book Co. 12°. 294 p. 90 cts.

FERREE, BARR. Christian Thought in Architecture. New York, from the Proceedings of the American Society of Church History. 8°, paper. 32 p.

KELLER, HELEN. Souvenir of the First Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf. 2nd ed. Washington, Volta Bureau. 4°, paper.

NATURAL SCIENCE. Vol. I, No. 1, March, 1892. London and New York, Macmillan & Co. Monthly. 8°. 80 p.

NEWALL, JANE H. Outlines of Lessons in Botany. Part II: Flower and Fruit. Boston, Ginn & Co. 12°. 396 p. Ill.

PARSONS, JAMES RUSSELL, JR. French Schools through American Eyes. Syracuse, C. W. Bardeen. 8°. 130 p. \$1.

PHILLIPS, MORRIS. Abroad and at Home. New York, Brentano's. 12°. 251 p.

SMITHSONIAN INSTITUTION. Annual Report of the Board of Regents to July, 1890. 8°. 842 p. Washington, Government.

Exchanges.

[Free of charge to all, if of satisfactory character. Address N. D. C. Hodges, 874 Broadway, New York.]

For sale or exchange, Das Ausland, 10 vols., 1892 to 1891, including 6 vols. bound, 4 in numbers. Wheeler Survey, vol. 1. Geog. Report; also vol. 6, Botany; Production of gold and silver in the United States, 1880, '1, '2, '3, '5; Selfridge Isthmus of Darien. Will sell at very low prices. J. F. James, 1443 Corcoran St., Washington, D. C.

For exchange.—A fine thirteen-keyed flute in leather covered case, for a photograph camera suitable for making lantern slides. Flute cost \$27, and is nearly new. U. O. COX, Mankato, Minn.

To exchange: Experiment Station bulletins and reports for bulletins and reports not in my file. I will send list of what I have for exchange. P. H. ROLFS, Lake City, Florida.

Finished specimens of all colors of Vermont marble for fine fossils or crystals. Will be given only for valuable specimens because of the cost of polishing. GEO. W. FERRY, State Geologist, Rutland, Vt.

For exchange.—Three copies of "American State Papers Bearing on Sunday Legislation," 1801, \$2.50, new and unused, for "The Sabbath," by Harmon Kingsbury, 1840; "The Sabbath," by A. A. Phelps, 1842; "History of the Institution of the Sabbath Day, Its Uses and Abuses," by W. L. Fisher, 1840; "Humorous Phases of the Law," by Irving Browne; or other works amounting to value of books exchanged, on the question of governmental legislation in reference to religion, personal liberty, etc. If preferred, I will sell "American State Papers," and buy other books on the subject. WILLIAM ADISON BLAKELY, Chicago, Ill.

Wanted, in exchange for the following works, any standard works on Surgery and on Diseases of Children: Wilson's "American Ornithology," 3 vols.; Coues' "Birds of the Northwest" and "Birds of the Colorado Valley," 2 vols.; Minot's "Land and Game Birds of New England"; Samuels' "Our Northern and Eastern Birds;" all the Reports on the Birds of the Pacific R. R. Survey, bound in 2 vols., morocco; and a complete set of the Reports of the Arkansas Geological Survey. Please give editions and dates in responding. R. ELLSWORTH CALL, High School, Des Moines, Iowa.

To exchange Wright's "Ice Age in North America" and Le Conte's "Elements of Geology" (Copyright 1882) for "Darwinism," by A. R. Wallace; "Origin of Species," by Darwin; "Descent of Man," by Darwin; "Man's Place in Nature," Huxley; "Mental Evolution in Animals," by Romanes; "Pre-Adamites," by Winchell. No books wanted except latest editions, and books in good condition. C. S. Brown, Jr., Vanderbilt University, Nashville, Tenn.

For Sale or Exchange for books a complete private chemical laboratory outfit. Includes large Becker balance (200g. to 1-ton), platinum dishes and crucibles, agate motors, glass-blowing apparatus, etc. For sale in part or whole. Also complete file of *Silliman's Journal*, 1862-1885 (62-71 bound); Smithsonian Reports, 1854-1883; U. S. Coast Survey, 1854-1860. Full particulars to enquirers. F. GARDINER, JR., Pomfret, Conn.

Wants.

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WANTED.—Books on Anatomy and Hypnotism. Will pay cash or give similar books in exchange. Also want medical battery and photo outfit. DR. ANDERSON, 182 State street, Chicago, Ill.

WANTED.—A college graduate with some normal training, to teach the sciences, at \$1,800 per year, in a Southern college. A Baptist or a Methodist preferred. Must also be a first-class Latin scholar. A. H. Beals, Box K, Milledgeville, Ga.

A PROFESSORSHIP in Chemistry is wanted by one who has had five years' experience in that capacity. Would prefer to give instruction by lectures and experiments rather than by text-book methods. Would like a position in a college or university where there is a good student's laboratory. Special points of strength claimed are: (1) Thorough control of a class and good order during lectures and recitations. (2) Accuracy in experimenting with chemicals and skill in the manipulation of chemical apparatus. The permission of several distinguished educators has been given to refer to them if required. Would not care to accept a position paying less than \$1,500. Address B. E., care of *Science*, Advertising Dept., 47 Lafayette Place, New York.

ADDRESS WANTED.—Will some one please send me the address of the Secretary of the American Philological Society. Also that of Herbert Spencer. ADDISON, Room 84, 164 Madison St., Chicago, Ill.

ADDRESSES of Old Book Dealers wanted.—Wishing to obtain a number of old books out of print, I very much desire the addresses or catalogues of rare second-hand book dealers. If there is a directory or list of such dealers I should like to obtain possession of one. W. A. BLAKELY, Chicago, Ill.

WANTED.—(1) A white man versed in wood and iron working, able to work from specifications and plans, suited for an instructor of boys; his business to have charge of shops of school, outline and direct the work for foremen and students; salary to be \$1,000 per annum (nine months). (2) A man (black preferred) to teach the colored, iron working and forging, subordinate to the preceding; salary, \$720. (3) A man (white) competent to take classes in engineering (assistant's position), but with the ability to perform any of the work required in any of the ordinary engineering courses of our universities; salary from \$1,000 to \$1,500. A. H. BEALS, Milledgeville, Ga.

along the embankments of the rivers, and others the ruins of the cotton spinning mill at Nagoya.

Altogether this album of plates is a most valuable contribution to the history of the earthquake, and may well merit a place on the shelves of anyone interested in Seismology. The first edition of 1,000 copies has all been sold at 6 yen (about \$4.50), which is a very low price for such a volume; and a second edition is in preparation, perhaps ready for issue by this time. This will contain one or two additional plates, and will be sold at a somewhat higher price.

C. G. R.

Princeton, April 9.

AMONG THE PUBLISHERS.

EDGERTON CASTLE'S important work on "Schools and Masters of Fence," which has heretofore only been obtainable in an expensive 4to form, will shortly be issued by Macmillan & Co. as a volume in the Bohn Library. The reprint will contain all the

original illustrations and some additions in matter over the original work.

—G. P. Putnam's Sons add to their previous announcements the following: "Materialism and the Modern Physiology of the Nervous system," by William H. Thomson, M.D., professor of Materia Medica and Diseases of the Nervous System in the Medical College of New York. This volume, which will be illustrated, comprises the material (revised, with some additions) of two lectures recently delivered by the author before Columbia College, and at the McGill University, Montreal. Professor Freeman, whose sudden death a fortnight back has caused to be left unfinished a good deal of important literary work, had just before his death completed the proof-reading of the last pages of "The Story of Sicily," which he had prepared for the *Story of the Nations Series*. The preface to the volume, which he had not completed, will now probably be written by his son-in-law, Professor Arthur Evans.

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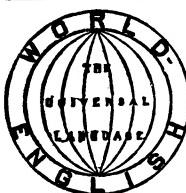
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